4D-710 in Adult Patients With Cystic Fibrosis (CF)

ClinicalTrials.gov Identifier: NCT05248230

Recruitment Status : Recruiting
First Posted : February 21, 2022
Last Update Posted : February 6, 2023

See **Contacts and Locations**

View this study on Beta.ClinicalTrials.gov

Sponsor:
4D Molecular Therapeutics

Information provided by (Responsible Party):
4D Molecular Therapeutics

Study Details | Tabular View | No Results Posted | Disclaimer

How to Read a Study Record

Study Description

Go to

Brief Summary:

This is a Phase 1/2 multicenter, open-label, single dose trial of 4D-710 investigational gene therapy in adults with CF who are ineligible for or unable to tolerate CFTR modulator therapy.

Condition or disease	Intervention/treatment	Phase
Cystic Fibrosis Lung	Biological: 4D-710	Phase 1 Phase 2

Detailed Description:

This Phase 1/2 trial will evaluate the safety, tolerability, and preliminary efficacy of 2 dose levels of 4D-710, an investigational gene therapy, in adults with cystic fibrosis lung disease who are ineligible or unable to tolerate CFTR modulator therapy.

Study Design

Go to

Study Type :	Interventional (Clinical Trial)
Estimated Enrollment :	21 participants
Allocation:	Non-Randomized
Intervention Model:	Sequential Assignment
Masking:	None (Open Label)
Primary Purpose:	Treatment
Official Title:	An Open-label, Phase 1/2 Trial of Gene Therapy 4D-710 in Adults With Cystic Fibrosis
Actual Study Start Date :	March 29, 2022
Estimated Primary Completion Date :	August 2024
Estimated Study Completion Date :	August 2025

Resource links provided by the National Library of Medicine NIH NLM

MedlinePlus Genetics related topics: Cystic fibrosis

MedlinePlus related topics: Cystic Fibrosis Genes and Gene Therapy

Genetic and Rare Diseases Information Center resources: Cystic Fibrosis

U.S. FDA Resources

Arms and Interventions

Go to

Arm	Intervention/treatment
Experimental: 4D-710 Dose Exploration Cohort 1 Single inhalational administration of 4D-710 Dose Level 1	Biological: 4D-710 4D-710 is an adeno-associated virus (AAV) gene therapy comprised of an AAV capsid variant (4D-A101) carrying a transgene cassette encoding human cystic fibrosis transmembrane conductance regulator with a deletion in the regulatory domain (CFTRΔR).
Experimental: 4D-710 Dose Exploration Cohort 2 Single inhalational administration of 4D-710 Dose Level 2	Biological: 4D-710 4D-710 is an adeno-associated virus (AAV) gene therapy comprised of an AAV capsid variant (4D-A101) carrying a transgene cassette encoding human cystic fibrosis transmembrane conductance regulator with a deletion in the regulatory domain (CFTRΔR).
Experimental: 4D-710 Dose Expansion Cohort Single inhalational administration of 4D-710 at the selected dose	Biological: 4D-710 4D-710 is an adeno-associated virus (AAV) gene therapy comprised of an AAV capsid variant (4D-A101) carrying a transgene cassette encoding human cystic fibrosis transmembrane conductance regulator with

Arm	Intervention/treatment
	a deletion in the regulatory domain (CFTRΔR).

Outcome Measures

Go to

Primary Outcome Measures :

1. Incidence and severity of adverse events [Time Frame: 24 Months]

   Safety and tolerability of 4D-710 following a single inhalation dose, as assessed by incidence and severity of adverse events, serious adverse events and dose limiting toxicities, including clinically significant changes from baseline to scheduled time points in safety parameters.

Eligibility Criteria

Go to

Information from the National Library of Medicine

Choosing to participate in a study is an important personal decision. Talk with your doctor and family members or friends about deciding to join a study. To learn more about this study, you or your doctor may contact the study research staff using the contacts provided below. For general information, Learn About Clinical Studies.

Ages Eligible for Study:	18 Years and older (Adult, Older Adult)
Sexes Eligible for Study:	All
Accepts Healthy Volunteers:	No

Criteria

Key Inclusion Criteria:

1. 18 years and older
2. Confirmed diagnosis of cystic fibrosis (CF) and CF lung disease including:
   a. Sweat chloride ≥ 60 mmol/L

b. Mutation Status

- Bi-allelic mutations in the CFTR gene, or
- Single mutation in the CFTR gene and clinical manifestations of CF lung disease

c. Ineligible for CFTR modulator therapy, or previously received modulator therapy but discontinued due to adverse effects.

3. Forced expiratory volume in 1 second (FEV1) ≥50% and ≤100% of predicted (per Global Lung Function Initiative) at Screening
4. Resting oxygen saturation ≥ 92% on room air at Screening

Key Exclusion Criteria:

1. Any prior gene therapy for any indication
2. Active Mycobacterium abscessus infection requiring ongoing treatment at Screening
3. Active allergic bronchopulmonary aspergillosis requiring management with systemic corticosteroids or antifungal therapy
4. Two or more pulmonary exacerbations requiring treatment with intravenous (IV) antibiotics within 6 months prior to Screening
5. Contraindication to systemic corticosteroid therapy
6. Requires chronic use of systemic corticosteroids or immunosuppressants to treat another condition
7. If no known diagnosis of cystic fibrosis related diabetes (CFRD), Type I, or Type II diabetes: Hemoglobin A1C ≥6.5% at Screening
8. If known diagnosis of CFRD, Type I or Type II diabetes: Hemoglobin A1C >7.5% at Screening
9. Recent history of symptomatic hyperglycemia or unstable blood glucose levels as per Investigator's assessment
10. Other conditions that, in the Investigator's opinion, may interfere with management of corticosteroid-related hyperglycemia
11. Body Mass Index (BMI) <16
12. Laboratory abnormalities at screening:
    - ALT, AST or GGT ≥ 3 × the upper limit of normal (ULN)
    - Total bilirubin ≥ 2 × ULN
    - Hemoglobin < 10 g/dL
13. Requirement for continuous or night-time oxygen supplementation
14. Known CF liver disease with evidence of cirrhosis
15. History of thrombosis (excluding catheter-related thrombosis) or conditions associated with

increased risk of thrombosis

Contacts and Locations

Go to

Information from the National Library of Medicine NIH NLM

To learn more about this study, you or your doctor may contact the study research staff using the contact information provided by the sponsor.

Please refer to this study by its ClinicalTrials.gov identifier (NCT number): ***NCT05248230***

Contacts

Contact: 4DMT Patient Advocacy (888) 748-8881 clinicaltrials@4DMT.com

Locations

United States, Alabama

University of Alabama Child Health Research Unit **Re**
Birmingham, Alabama, United States, 35233
Contact: Heather Hathorne hyhathorne@uabmc.edu
Contact: Kathryn Monroe kathrynmonroe@uabmc.edu
Principal Investigator: George M. Solomon, MD

United States, Colorado

National Jewish Health **Re**
Denver, Colorado, United States, 80206
Contact: Jennifer Taylor-Cousar, MD TaylorCousarJ@NJHealth.org
Contact: Alexandra Wilson wilsona@njhealth.org
Principal Investigator: Jennifer Taylor-Cousar, MD

United States, Kansas

University of Kansas Medical Center **Re**
Kansas City, Kansas, United States, 66160
Contact: Lawrence Scott lscott2@kumc.edu
Principal Investigator: Joel Mermis, MD

United States, Massachusetts

Massachusetts General Hospital **Re**

Boston, Massachusetts, United States, 02114

Contact: Margot Hardcastle mhardcastle@mgh.harvard.edu

Principal Investigator: Allen Lapey, MD

Boston Children's Hospital **Re**

Boston, Massachusetts, United States, 02115

Contact: Monica Ulles monica.ulles@childrens.harvard.edu

Principal Investigator: Henry Dorkin, MD

United States, North Carolina

University of North Carolina at Chapel Hill **Re**

Chapel Hill, North Carolina, United States, 27599

Contact: Alexandria Nesbit alexandria_nesbit@med.unc.edu

Contact: Margret Powell margret_powell@med.unc.edu

Principal Investigator: Scott Donaldson, MD

United States, Ohio

Rainbow Babies and Children's Hospital/University Hospitals Cleveland Medical Center **Re**

Cleveland, Ohio, United States, 44146

Contact: Laura Batke Laura.Batke@UHhospitals.org

Contact: Kathleen Hilliard kathleen.hilliard@uhhospitals.org

Principal Investigator: Alex Gifford, MD

Nationwide Children's Hospital **Re**

Columbus, Ohio, United States, 43205

Contact: Terri Johnson terri.johnson@nationwidechildrens.org

Principal Investigator: Karen S. McCoy, MD

United States, Pennsylvania

Penn State Health **Re**

Hershey, Pennsylvania, United States, 17033

Contact: Diane Kitch dkitch@pennstatehealth.psu.edu

Principal Investigator: Judie A. Howrylak, MD, PhD

The Hospital of the University of Pennsylvania **Re**

Philadelphia, Pennsylvania, United States, 19104

Contact: Melissa Molter melissa.molter@pennmedicine.upenn.edu

Principal Investigator: Daniel Dorgan, MD

United States, Texas

The University of Texas Southwestern Medical Center Re
Dallas, Texas, United States, 75390
Contact: Ashley Keller ashley.keller@utsouthwestern.edu
Principal Investigator: Raksha Jain, MD

United States, Virginia

Virginia Commonwealth University Health System Re
Richmond, Virginia, United States, 23298
Contact: Margaret K. Lessard margaret.lessard@vcuhealth.org
Principal Investigator: Nauman A. Chaudary, MD

Sponsors and Collaborators

4D Molecular Therapeutics

Investigators

Study Director: Susan Limb, MD 4D Molecular Therapeutics

More Information

Go to

Responsible Party:	4D Molecular Therapeutics
ClinicalTrials.gov Identifier:	NCT05248230 History of Changes
Other Study ID Numbers:	4D-710-C001
First Posted:	February 21, 2022 Key Record Dates
Last Update Posted:	February 6, 2023
Last Verified:	February 2023

Studies a U.S. FDA-regulated Drug Product:	Yes
Studies a U.S. FDA-regulated Device Product:	No

Keywords provided by 4D Molecular Therapeutics:
CF
Cystic Fibrosis
Gene Therapy

Additional relevant MeSH terms:

Cystic Fibrosis	Digestive System Diseases
Pulmonary Fibrosis	Lung Diseases
Fibrosis	Respiratory Tract Diseases
Pathologic Processes	Genetic Diseases, Inborn
Pancreatic Diseases	Infant, Newborn, Diseases